

## **Historic, Archive Document**

Do not assume content reflects current scientific knowledge, policies, or practices.



62.71

C1923

CAT 10892491

LIBRARY  
RECORDED

\* MAR 9 - 1945 \*

U S Department of Agriculture

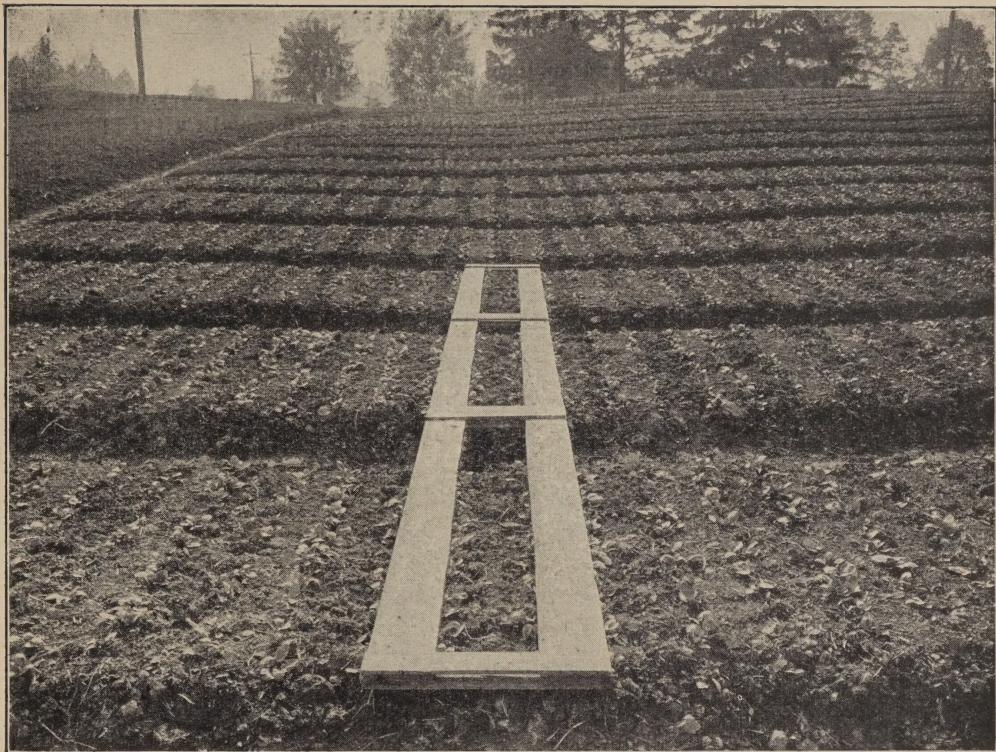


# *Commercial Pansy Culture*

By E. J. STEELE  
PORTLAND 2, OREGON

FIFTEENTH EDITION





MARKET BEDS AND SETTING BOARD. See page 7.

## He must have used good seed

"I had six honest service men: (they taught me all I knew): Their names were What and Why and When and How and Where and Who."

—Kipling.

Please read our request on back cover.

All halftones used in this book were made from actual photographs of Steele's Mastodon Pansies.

## PARDON ME

In explanation, and apology for writing this booklet, I will say that for many years it has been my pleasure to answer very many queries by correspondents interested in the Commercial Culture of Pansies.

In order that more time may be employed in the field work of seed production, which I like much better than office labor, I am presenting a few suggestions that result from almost fifty years' experience as a grower of pansies only—an industry which with us has now become exclusively the production of pansy seed. Therefore, when my neighbor in Maine or Australia "wants to know you know," instead of getting a letter back he is going to be put to the trouble of "wading through" this booklet, and even then, perhaps, only to find that "there is nobody at home!"

I offer the opinions of several successful pansy specialists on several different topics, upon which I believe you can fully rely. So, if you will read with confidence what they say, and take "with a pinch of salt" what I may tell you—you cannot get very far away from the fundamentals of commercial pansy culture.

I will not deny that I am a strong believer in the merits of Mastodon pansies; here and there you will find proof of this. It is because I desire every market grower of pansies to try our pansies once.

## To Our Competitors

I do not expect our business to grow at the expense of our worthy competitors, to every one of whom I wish the greatest of success. Their pansy industries and ours will prosper because of high quality, satisfying service and the immensely increasing demand of the public for a superior type of pansy, which is beyond question the most popular flower in the world now, and for the future.

With proper handling, it is likewise the most profitable flower to grow. Let your slogan be, "Plant Plenty of Pansies."

---

### "KEEP FISHIN"

HI SOMERS was the durndest cuss  
Fer ketchin' fish—he sure was great  
He never used to make no fuss  
About the kind of pole er bait,  
Er weather, neither; he'd just say,  
"I got to ketch a mess today."  
An' toward the creek you'd see him slide,  
A-whistlin' soft an' walkin' wide.  
I says one day to Hi, says I,  
"How do you always ketch 'em, Hi?"  
He give his bait another swishin'  
An' chucklin', says, "I jest keep fishin';"  
—Ray Clarke Rose, in the Vagabond.

## PANSIES and PANSIES

You hear this question asked: "Will not the ordinary garden variety of pansy, grow large and beautiful if well cultivated, and highly fertilized?"

This question is best answered by asking another question—If you curry and feed a Shetland pony plenty of oats, will he make a Clydesdale horse weighing a ton?

The American people are lovers of huge pansies, but the original type of pansy was about the size of a ten cent piece, and it goes without saying that, to double that size several times over, as well as creating new colors and improving existing hues, was no easy task. Especially so, when we all know that the natural tendency of pansies is to breed back to the primitive forms and the original colors.

If we will appreciate the fact that every fine flower or plant we see represents probably years of labor, expense, not to mention worry, and disappointments, then we shall no longer wonder why there is such a difference in pansies.

### Mastodon Pansies of the "Nineties"

Living in a large city and growing blooming plants for the retail trade, it was the practice of pansy lovers to visit our gardens and make their own selections. Naturally, they expressed their opinions, freely criticising this one as "common," that one—a "Johnny Jump Up"—too small—you couldn't give it to me, etc., **you know.** But, selecting others, and now and then praising certain ones.

A habit was soon formed of noting these praise-worthy types, and, of course, these extra good ones were scarce, and for fear we would not have enough next year, in the seed we bought, we began staking the very plants they wanted most for our own use, and that was the beginning of Mastodon panies. Thereafter, it was a fixed and invariable rule never to part with a seed plant at any price.

From criticisms and the various opinions of hundreds of pansy fans it was discovered that their verdict was unanimous for large size, a special liking for reds, yellows, and fancy or bizarre types, running mostly to the lighter shades. There was an almost universal demand for a wide range of colors. "Can you fill an order for 100—no two alike, etc.?"

---

"The man who offers nothing but price  
usually has nothing but price to offer."

Our number 1 desire is to please our customers. We believe that the best way to do this is to give them something different and something better—more than their money's worth. But we must have some help from our good friends. Their letters with constructive criticism help us to keep our strains balanced in color range so that the greatest number may be satisfied with Mastodon pansies. So drop us a line and tell us what changes you would like to see. Your suggestion may be the best one in our files.

## The Soil

Soil for pansies should be well cultivated, fine and friable. A loamy soil, with some clay, and free of gravel, is perhaps the best but I have seen them thrive wonderfully on black sand of the sea coast. New land or a heavily sodded soil when subdued is splendid for pansies. It is hopeless to attempt growing fine pansies without fertilization.

## When to Sow Seed

This depends, of course, on climatic conditions, but for early blooming stock for Spring sales, the seed should be sown in the Summer, early enough so that seedlings transplanted in the early or late Fall, according to the climate, will reach an almost ready-to-bloom stage as Winter sets in, so that with the first warm days of Spring gardening weather, they will come into bloom at once.

It takes six to seven weeks during warm weather to produce sizeable seedlings, and four to six weeks more growing on, to be ready for Winter as above.

Seedlings should not be thicker than 125 per sq. ft. and thinner is better. Large stocky seedlings will "make good," while small, "leggy" stock will not. The big sowing season in the Northern States is July and August—in the Southern States and California, later, or earlier for winter blooms.

Mr. E. O. Orpet, writing for the "Review" has this to say: "Many gardeners for their main crop sow some time in January or February. If seed is sown in flats of fine potting soil, and placed in a temperature of 55° at night, will give excellent plants, the best possible to set out Decoration Day, when those carried over from the Autumn sown seed will have about done flowering."

"As soon as the young seedlings are up, and large enough to handle, they must be pricked off into flats at once, and by the end of March, they will be both large and strong enough to set out into a gentle hot bed, where they will come quickly and soon begin to flower."

## Fritz Bahr Says: MAKE A LATE SOWING OUTDOORS

If you use Pansies during Spring for bedding, you most likely will depend on the plants grown from seed sown during July and August and later on transplanted where they are to remain over Winter. This will give you the best stock for early use the following April. Many of us have experienced of late years a steady increase in the demand for Pansies and the season for selling the plants doesn't end when the main batch of early stock is sold. We need them all through May and June and for that purpose you might consider right now (early October) sowing more seed in a coldframe. If it is sown thin in rows about 4 in. apart, the plants can remain all Winter without being transplanted. Early next April, when active growth starts again, transplant the stock into nice soil and it will soon grow into bushy plants ready to be sold after all your larger plants are gone. This method, to my mind, is better than sowing under glass during January, because it means less work and at the same time will give you as good results. It won't hurt to protect the plants a little this Winter, but they usually pull through O. K. even if they only have four or five leaves by December.

### **STILL TIME TO BENCH**

If you have fair sized Pansies on hand outdoors and bench space in a cool house, bring in a good number of them, plant in good soil, maintain not over 45 degrees over night and keep the plants clean. If you do this they will flower from January on, although not heavy at first, nor have blooms on long stems, but even these you can use to good advantage. With a little care, the plants will bloom away into April. Another lot of plants should be brought in six weeks or so before Easter to have them for that day.

FRITZ BAHR,  
Florists' Exchange, Nov. 24.

## **GERMINATION**

During the germination period—eight to ten days in Summer and longer with cool weather, there must always be present three conditions and even a brief absence of any of these three, especially after seed has begun to sprout, is absolutely fatal.

These three are:

1. Heat 50° to 75°.
2. Moisture, but not wetness.
3. Ventilation, the plantlet within the seed must breathe or die,

If you are getting satisfactory results, by all means use your own methods. If you are not, possibly the following suggestions may be helpful.

The chief difficulty in germination, we find to be keeping the proper amount of moisture all the while. Such is the varying

conditions of the atmosphere that while watering seed beds once for today is sufficient, tomorrow it may be necessary to spray them four times. Too much water here, and not enough there, is sure to happen without care.

Temperature higher than 75° is not fatal, but there must be increased watchfulness to avoid drying out. Drying winds are a dangerous menace to the seed beds. **Watch your moisture!**

Our own system in open ground follows:

If your soil is not of the quality of first-class potting soil, prepare your bed for sowing as follows:

1. Have your ground free of weeds and trash and pulverized to a depth of 8 inches or more.

2. On level surface spread evenly a layer of pulverized manure or rich compost (we use and recommend compost). If you must use commercial fertilizers bone-meal is one of the best. When you use commercial fertilizers it is suggested that you use peat moss or charcoal with them.

3. Overlay compost with  $\frac{1}{4}$ " of your best soil. Then rake smooth and tamp or roll.

4. Use the hose freely so that moisture will penetrate several inches.

5. Now true up surface for planting. This operation is important so that the seed will rest at an even depth after it is covered.

6. Sow in drills or broadcast. We broadcast. Cover the seed  $\frac{1}{16}$  to  $\frac{3}{16}$ " with a sifted mixture of compost, 1 part and peat moss two parts. If when sown broadcast after moistening, a seed appears here and there on the surface the covering is O.K.

7. Now cover with light burlap or thin sheeting, and weight down. Again use fine spray to moisten burlap and seed covering material.

8. Allowing plenty of ventilation, keep your beds moist, quite moist, but not soaking wet, until plants come up.

Never allow your beds to become dry. Any dryness after seeds sprout is absolutely fatal. We use 125 to 150 square feet to sow an ounce of seed.

As soon as plants begin to come through freely we remove covering permanently and sift tops of beds with  $\frac{1}{8}$  to  $\frac{1}{4}$  inch of peat moss.

Pansy seed will germinate in 6 to 14 days, depending on the weather. Beds should be watched closely during this period so that when the plants appear above ground the covering may be removed promptly. Failure to remove the covering at the right time will result in the plants growing through the burlap and being uprooted when same is removed.

We estimate 5,000 plants per ounce of our Mastodon pansy seed but our patrons often report much higher germinations, as much as 20,000 to the ounce.

With labor, other expense and space occupied to be considered, there is no crop grown that will pay the handsome profit of a bed of pansy seedlings or blooming plants.

The unusually high germinating qualities of Mastodon Pansy Seed is a revelation to all extensive growers who use our seed.

#### **PANSY SEED, ABOUT 5000 PLANTS PER OUNCE**

By Fritz Bahr

You don't have to obtain 5000 plants out of an ounce of Pansy seed in order to make it pay, even if the ounce should cost you \$7, \$8, or \$10. But you do have to grow on plants with flowers superior to ordinary stock. Sowing expensive Pansy seed and getting the highest percentage of seeds to germinate and develop into plants, means that you must sow in rows in a mellow soil and cover the seed but lightly. Do it out in the open if you only grow on a few thousand plants. Make use of a portable coldframe; place a little shade over the seeded surface and, if possible, maintain even moisture up to the time the little plants are well started. When the seed leaves appear, they don't want to be shaded but, at the same time, you can't afford to let them get along the best they can in a hard baked dry surface. The more you pay for seed the less you can afford to be careless about sowing and caring for the little plants, if you want to make money out of them.—Florists' Exchange.

#### **DAMPING OFF**

If you have any trouble with your seedlings damping off, we recommend that you treat your seed with semesan or copper oxide powders. Rootone applied with the disinfectant dust will often produce a better root system and subsequently a superior plant. Failure to treat seed with some disinfectant frequently causes loss of the entire crop.

It is our practice to water more heavily in the morning and lighter in the afternoon so that the beds never go into the night too wet. Time your watering with the weather. Mildew and damping off are almost sure to follow if late waterings are made. If your seedlings appear to be affected by damping off a liquid application of Semesan may help to arrest the condition.

#### **For the Blooming Plant Trade**

Make your beds five feet wide, and line them out so that the paths between the beds will afford drainage. In a rainy climate or wet soil it's a good plan to raise your beds by making your paths deep. Set seedlings as deeply as possible without covering or smothering them, as they will gradually climb out of the ground, and in rows across the bed 7 inches apart and 5 to 7 inches apart in the row.

See photo (on page one) of market beds ready for Winter mulching. Note setting board of sufficient length to cross three beds, and made of 6-inch boards 8 inches apart and bolted together with four sets of double cleats, so that 4 rows may be set across three beds at one placing of the board. You can then use the hoe, which is much cheaper than hand weeding, and **pansies need frequent surface cultivation to be at their best.**

A good type of pansy plant for the market is one that is small and stocky, and able to produce its first bloom early in the season, and of good commercial size.

A big flower on a small plant is a big winner in the market. A large plant with a small flower is worth little, if anything, at all.

When you get an initial bloom with a spread equal to the diameter of the plant you have a market product worth while.

A pansy bloom will increase in size, after it is fully opened and should have a chance to fully develop—say 24 to 48 hours, and should then go to market. If blooms are fresh and plants are carefully lifted in the early morning and roots moistened and with a small ball of earth rolled snugly in newspaper, the flower should last for at least three days.

## SHIPPING SEEDLINGS

For the commercial grower of seedlings the successful shipping of same is second in importance to growing them, and pardon me, if from sad experience, I mention a few don'ts first.

1. Don't send out any plants with less than five leaves, not counting the two initial leaves. 1. Because they do not stand up for a long-distance trip, and 2, even if they do arrive in fair condition, they will lack the "pep" of larger plants, and therefore, do not "grow on" to the satisfaction of the buyer. Yes, you can sell cheap attenuated seedlings, but you cannot build up a business by so doing.

2. Don't ship seedlings over 500 miles, until they are hardened off by a few chilly days and frosty nights. It means almost certain loss.

3. Don't bunch your plants in paper wrappings for distances over 200 miles. Ordinary paper used in that way gathers moisture—a fermentation starts—the plants heat and then rot.

4. Don't pack your plants in horizontal layers.

5. Don't crowd your plants by packing tightly. "No chance" when you do.

6. Don't allow any moisture on plants and little, if any, on roots.

Plants, when lifted for shipping, should be cool, with no moisture on the tops. Even if roots are wet, they should be thinly spread in a dry, cool place, turning them over gently and shaking roots entirely free from dirt. When tops are dry and roots are tak-

ing on a light color from drying, and when, in handling the plants, the dirt no longer clings to your fingers, your plants are then ready for packing.

## Dead Leaves

Where your shipment travels more than 1000 miles, dead leaves, if any, should be carefully picked off. They will not dry out and may start a fermentation, causing loss of shipments.

Use a light, strong box from five to six inches high; we buy spruce box ends  $\frac{1}{2}$  inch thick, of above width in strips, and cut same to proper size of box made to hold, say 1000 plants. All sides, tops and bottoms  $\frac{3}{16}$ " mill cut to 26". Thus, we have a box—size 5 to 6" high, 12" wide, more or less, and 26" long, holding about 1000 plants and made as tight and snug as possible.

Line the box at first with double newspapers, and then with oil paper, well up on sides and ends. It is now ready for the moss.

The greatest possible danger lies in improper moistening of moss. It should never be wet, but always moist—barely moist.

If you are shipping extensively, a clothes wringer with rolls set fairly close will leave the proper amount of moisture in your moss. Possibly friend wife will lend you hers.

With cool moss, no lumps, carefully carpet bottom of box one or more inches in thickness—sufficient to bring plants in vertical layers so that tops of plants will reach to within  $\frac{1}{4}$ " of top of box when nailed on, for ventilation.

## Important

It is a good plan to lay a printed or written slip of paper inside box with the words "If dry, remove wrappings and put plants in water." Even if badly shriveled they will "come back" fresh and strong. Better yet, attach a slip when mailing invoice, which should go with, or ahead of shipment.

Overlay top of box with oil paper, about 4" wider than width of box; next a double newspaper of same width, both cut long enough to nail down under top, which should come flush with sides to make shipment snug, and strengthen top. Don't crowd your plants—don't leave loose enough so they will scramble. After your plants are packed, pick up your box with a jerk endwise and if your plants move back and forth slightly, your packing is O.K. Midway between box ends run a stout, strong cord twice around box, and snub up tightly, tying on the edge of box and leaving long enough ends to tie on your shipping tag. Always mail your invoice under separate cover to serve notice that shipment is on the way. Your shipment is then ready to travel across continent safely.

## **Wintering Pansies Outside**

Even though you produce pansies successfully under glass, try a few outside.

In North Dakota, they Winter them outside by resetting seedlings in early September, which gives them a good start before the first hard freeze comes, after which they are covered about an inch deep with leaves, straw, or coarse manure, which is best. Heavy freezing does not injure pansies, but continual freezing and thawing will destroy them.

In milder climates, but subject to cold drying winds, a thin layer of straw or marsh hay, which can be kept in place by brush or sticks or boughs of trees, is O. K.

Wait until the ground is frozen hard; then give the pansy beds a mulch of straw, hay or leaves, just enough to cover the plants. The mulching is not to be given with the idea of keeping the plants warm, but rather to keep the frost in and prevent the heaving which follows sudden thaws and is disastrous to unmulched plants. Lay some light boards, cornstalks or brush on the leaves to prevent the mulch from being blown away. A light scattering of loam or old manure will answer the same purpose.

Snow makes the best possible mulch for your pansies. The real damage to unmulched plants comes toward Spring, when we get alternate freezings and thawing, and when the sun has increased power. At this time, plants which are not mulched are heaved out of the soil entirely, in some cases, or badly loosened. Do not worry about any mulch as long as you have a good snow covering.—C. W. Florists' Review.

## **MARKETING**

The most important factor of success for the commercial grower is marketing of a product like pansy plants, but it is somewhat difficult to offer any rule of action that would be general in application, because conditions are never the same in any two localities.

It would certainly be unwise to grow very much stock unless a satisfactory market was assured.

On the other hand, experts say that unless your sales increase annually 20% or more, you should search for the reason why. Nothing builds a business like the growing of the highest class stock, and that requires care, labor and expense. In a bed of 5,000 plants of high bred pansies, properly grown, will be found plants worth fifty cents per dozen, many for seventy-five cents and at least 25% that will retail for \$1.00 per dozen, but you, and not your customer must fix the price, and you can establish and get your price if you have the quality.

## The Prices You Get

Now, there is a small profit in pansies at fifty cents; a good profit at seventy-five cents, but your dollar pansies "bring home the bacon." (In our market garden days we were never able to supply the market with enough \$1.00 pansies.) And, let it be understood, the market has always been flooded at from twenty to thirty-five cents per dozen.

When you produce ordinary stock, your **customers and competitors fix your price**. When you produce highly superior quality, **you fix the price**.

## "Blood Will Tell"

Northwestern Oregon is probably the most perfect climate in the world for the production of pansy seed. Seasonable rains in spring time, followed by mild summer, and a rainless harvest produces and eures seed of the highest germinating quality known to the trade and which makes for superior quality and size of flowers. Delighted to have you include Mastodon Pansies in a competitive test "Blood will tell."

## An Attractive Display Will Double Sales

It is a common practice for the retailer to set his pansies in baskets or flats on the floor, so that you can only see a narrow profile, leaving their broad faces in almost total eclipse.

But if you have ten or twelve dozen pansies arranged with blooms all facing to the front on a bench or table two or three feet above the floor, you have something to draw attention like a brilliantly uniformed military band of sixty pieces in a street parade.

If you want to "get" the value of such a display, ask any merchant in your town to rent you space in his store front window. He would much rather rent you his meal ticket.

But if you will ask your retailer to stage your plants as above he'll gladly do it, because it puts a jingle in his pocket as well as in yours.

Even plants in flats can be packed in a very attractive manner, each plant separately wrapped, of course, and all blooms facing to the front, with contrasting colors arranged, as in baskets, and so that each bloom does not blanket the flower behind it.

Let it be kept in mind that it is a comparatively easy matter to grow stock, even good stock, but when it comes to the selling of it—all at a good round profit—that is really what counts.

## **Indoor Culture of Pansies for the Market**

Firstly, select, in the autumn, only strong, healthy, low growing young plants produced from seeds of the choicest varieties. Set these out at least 6 inches apart on the greenhouse beds or benches. The compost in the benches or beds should be very rich, in fact fully one-third well rotted cow manure. Pick off the first one or two crops of buds that the plants may develop better. A temperature of about 45 degrees at night, and 55 to 60 degrees in the daytime is suitable for pansies. A weak liquid fertilizer made from cow manure or hen manure will help keep the plants strong, if applied once or twice a week, and increase the length and strength of stem and size of flower. A heavy dusting of Scotch soot on the soil around the plants will help kill any insects in the soil, improve the color of the blooms and act as a mild fertilizer. The surface of the bed should be frequently stirred. Watering should be attended to between nine in the morning and noon, and the soil should be kept moist but not wet. The house should be kept well ventilated. Frequent mild fumigations or sprayings should be given the plants to keep off aphid. All of the above details will tend to make the plants robust, and large, and to produce large blooms on long stems. As regards length of stems, it may be added that the nearer the glass the plants are, the shorter the stems will be, and that plants growing farther away from the glass, especially if the light on the plants themselves is not very strong, will tend to produce long stems, but after all the best results as regards length of stems will be obtained in a modern greenhouse where there is the maximum amount of light and the greatest care given to every detail of the highest culture. Any plant in the open garden, as a rule, produces the longest and strongest flower stem when in the full light and under the highest cultivation, and any attempt to lengthen a stem under any other condition is usually to the detriment of the plant.

### **PESTS**

From much inquiry, correspondence and experience, as well, it seems to be true that a great deal can be done in the way of prevention of plant enemies, "an ounce of prevention is worth a pound of cure," and costs less time and money. Weeds, grass, trash and uncultivated soil are all nesting and breeding places for every kind of vermin. In fence corners, even in fences, around manure piles, under your benches, around your cold frames, they lie in hiding and waiting patiently for you to feed them with your valued crop.

### **Red Spider**

Of all pansy pests, red spider is the worst, but fortunately coming too late to injure outside Spring stock. The best authorities seem to agree that close up spraying with water under strong

pressure is the most effective. With a temperature of 85 degrees or more dust with sulphur. If you choose to use a spray, lime-sulphur is fine. The basis of the effectiveness of lime-sulphur is not as a direct poison but in drying it leaves a residue that readily oxidizes and produces sulphurous acid fumes which destroy the spiders even when these are secluded in protected places.

## Aphids

For light infestations spraying with water under pressure will suffice. For speedy results dust with fresh, strong nicotine sulphate.

## Slugs

Continued cultivation will usually control slugs. However, any of the Metaldehyde baits that we have tried are fast, effective and all that could be desired.

Ground tobacco stems scattered thinly over pansy beds every three or four weeks will create an odor which insects and worms detect and avoid by leaving the locality. This tobacco is finally worked into the soil, becoming a fertilizer rich in potash and nitrogen.

## DISEASES

The pansy is quite free from disease and here again as in dealing with pests, keep in mind that disease can be avoided by a little thoughtfulness and care. Watering toward night will cause mildew which is contagious. Do not put your beds near other plants that are likely to be attacked by mildew.

---

### A SIMPLE FORMULA

Keep thinking what you ought to do  
And how it should be done,  
You'll throw away a worn-out tool  
And get another one.  
Then scrap your worn-out methods  
Or they'll put you on the blink,  
Keep thinking what you ought to do  
And doing what you think.

Do what you think you ought to do  
And do it good and quick,  
Before some other thinking man  
Steps in and turns the trick.  
Let your thinking be constructive  
And your thought with action link,  
Keep thinking what you ought to do  
And doing what you think.

—H. G. SISSON.

## FERTILIZERS

The pansy is a very strong feeder and well rotted dairy manure mixed with peat is our choice. Everyone has his own ideas concerning what fertilizer to use and how to apply it. If your present methods are entirely successful we recommend that you stay with them, but we also suggest that each year you try some different method and formula on an experimental patch for possible better results.

Wood ashes and soot are excellent and help to keep the soil free of pests. Cover crops of vetch, clover, or peas help to make or preserve the humus in your soil. It is unwise to grow more than one crop of pansies on the same piece of ground without some system of rotation or cover cropping. After your crop comes off in the spring you could put in a cover crop and turn it under in the fall.

For bringing your plants along a bit faster, tankage, fish meal or poultry manure and peat will do nicely. Many fine growers are strong for bone meal and the results they achieve are proof of its good qualities. If available oyster shell dust is most excellent for pansies, about 2 pounds per 100 square feet. Super phosphate in the proportion of 1 pound per 100 square feet is of value to most any crop.

We are not experts on the application of concentrated fertilizers but we feel that the trend is in that direction. There are many fine books and magazine articles on the subject that may help you materially in your efforts to produce finer, healthier plants.

Have an expert test your soil and make recommendations. Remember every soil requires different treatment. We consider it advisable to keep your soil PH value around the neutral point. Concentrated fertilizers should be used with caution. The ideal fertilizer is one that does not burn the plants and becomes available as needed. Thus small, well timed applications will give a better and safer result than one large dose. These fertilizers should be worked into the ground not too close to the plants for maximum results, and the use of peat moss in conjunction with these concentrated plant foods is considered good practice.

Your customers will often ask how to fertilize their plants. Tell them that one tablespoon of Vigoro dissolved in one gallon of water will keep their pansies happy providing the bed is mulched with peat moss. Each plant should receive one cupful every two weeks.

In every state and province in North America, you will find a county agricultural agent that will be glad to analyze your soil and usually without charge. In this way, we can easily know what kind of fertilizers are most necessary.

They can also supply you with valuable information as to local diseases and pests, and the way to fight them.

## **Not Like Mother's Pie**

The American people like the pie that mother made, but not the pansies that she grew. In fact, they do not want this year, the same pansies they had last year, but better ones, different ones, and, believe me, they are willing to pay the price.

## **Why We Grow Pansy Seed Only?**

Primarily, because I am fond of nature and the great out-of-doors.

Though educated for a profession it seemed to me that I was better suited to produce something from the soil.

It happened years ago that I came into possession of a small garden of fruits and flowers, including a tiny bed of pansies

Having spent my early years on a farm, a little experience was mine.

The little garden thrived but the pansies were the best of all.

The public believes that all specialists are an asset and he who confines himself to an exclusive specialty should be able to render the most satisfactory service to all who require his assistance; therefore "Pansies Only" is my work, and my many patrons and friends surely do keep me busy, and for all this busy-ness, I thank them, very, very much.

## **Words Fail**

Words fail to express my appreciation to the growers for their most generous response to my invitation to "send for booklet". The many complimentary letters I have received make it plain to me that they have overestimated its value. Anyway, I am hoping this booklet will be an improvement.

I am also under very many obligations to the trade journals for their favorable reviews, and kindly words of appreciation of the subject matter thereof.

## **Give Me A Lift**

As before, criticisms and suggestions will be welcome, and especially any ideas you may offer in the "growing game" of fine pansies.

We must all render to humanity some service of value, and in such measure as our station in life requires, otherwise we do not achieve success.

This booklet is offered free to any actual or prospective commercial grower of pansies, without any obligation, ifs or "strings" of any kind.

Just your name and address—send it along.

That's all!

## WHY NOT JUMBOS?

Never in our forty years as pansy specialists have we ever seen a strain of Mastodon pansies "go over" like Jumbo mixed.

First of all Jumbo is a very early bloomer, and any wholesale grower knows that getting into the market ahead of strong competition "brings home the bacon." In fact the only way to make real money out of blooming pansy plants is to be a few jumps ahead of the selling rush that is bound to come before the spring season is over.

Four inch blooms and larger are not uncommon in our seed fields of Jumbo. A most unusual feature is the wide range of vivid colors mostly all absolutely unique to big pansies—no washed out shades which you all know are a "flop" when your customers see them. Keep away from washed out shades of pansies. It's a wide range of colors, and a riot of colors in your baskets, flats, and gardens that makes your cash register ring the bell. By the way, what do you know about three tone pansies?

We also highly recommend our Super Maple Leaf Mixed and our Super Swiss "400" mixed. They are grand strains.

If my ideas about marketing pansies agree with yours let us have the pleasure of serving you with some Jumbo pansy seed and don't forget that our strains are all grown to suit a high class American trade, and also that all our finest pansies are to be found in our mixtures.

---

It is a pleasure for me to say that almost fifty years of exclusive cultivation of pansies does not mean that there is nothing more for me to learn about pansies. On the contrary, they are a constant study.

Therefore, your counsel will be of value, or your questions answered cheerfully, if within my power.





STEELE'S MASTODON PANSIES

To all who write for our free "Commercial Pansy Culture"  
we will also mail the free catalog issued yearly by

**STEELE'S PANSY GARDENS**

Portland 2, Oregon, U. S. A.